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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/715,540

11/19/2003

John West

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EXAMINER

CARIASO, ALAN B

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/715,540	Applicant(s) WEST ET AL.	
	Examiner Alan Cariaso	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 12-37 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-31 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-7, 12-18 and 32-37 is/are rejected.
- 7) ☒ Claim(s) 2 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Receipt of applicant's amendment filed January 27, 2006 is acknowledged.
Claims 1-7 and 12-37 are pending. Claims 8-11 are cancelled.

Drawings

2. The drawings were received on January 27, 2006. These drawings are approved.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 32, 33, 34, 36 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 32, the limitation "the light source does not include a domed lens cover" is indefinite as being contradictory to the preceding limitation "the light source comprises a domed lens cover" of claim 31.
6. Claim 33, last line, claim 34, last line and claim 37, last line, "the face" has no antecedent basis.
7. Claim 36, line 6, "the light guide characteristics" are vague and indefinite, or at least have no antecedent basis.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3, 5-7, 12, 13 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by GOFMAN et al (US 7,029,277 B2).

10. GOFMAN discloses a light guide (housing 58, figs.8a-10) for use in a dental curing device, or a dental light curing apparatus comprising a light source (LEDs 22) and a light guide (58), the light guide (58) comprising an entrance area (59), a lens (27), at least one reflector (conical portion where rays 28 are reflected in fig.8b), a light pipe or image conduit (26) and an exit area (36), wherein the lens (27) and reflector (fig.8b) are constructed of a single continuous homogeneous material and wherein the exit area (36) is sized to be placed inside a patient's mouth such that light is projected onto a single tooth (col.6, lines 10-11, col.4, lines 25-31); the light source being an LED (22) and a multiple LED (LEDs 22 on board 23) inherently consisting of dies and emitters; wherein the light source (22) comprises a single domed lens cover (lens beyond emitting point in fig.8b).

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11. Claims 33, 35, 36 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by FRIEDMAN et al (US 5,290,169).
12. FRIEDMAN '169 discloses a dental light curing device comprising: at least one light source (16), a light guide (12) having a proximal end (21) and a distal end (39), wherein light from the light source (16) enters the light guide (12) through the proximal end (21) and exits the distal end (39) and wherein the intensity of the light (as shown by area-density of light rays) at the distal end (39) of the light guide increases (converging of the light rays at point spaced away from distal end 39) with distance away from the face of the distal end (39) of the light guide (12); given the structure, the light guide has characteristics (tapering, acrylic material, internal reflection) allowing or capable of minimizing the loss of intensity of the light (e.g. col.3, line 67 to col.4, line 2).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over GOFMAN et al (US 7,029,277 B2) in view of KOVAC et al (US 6,200,134 B1).
15. Claims 14 and 18 recite the light source does not include a domed lens cover not disclosed by GOFMAN. KOVAC teaches an alternative embodiment of LED array of dies (60) that do not include domed lens cover (fig.4) from domed cover LEDs (30-fig.1,

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43-figs.2-3A) to for the purpose of having increased density of light emitters and a broader area of illumination relative the input (66) of the light pipe (67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the curing apparatus of GOFMAN et al to include the type of dome-cover-less light emitting dies as taught by KOVAC et al in order to increase light intensity with a greater number and density of light emitters, in curing at the output of the light guide.

16. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over FRIEDMAN et al (US 5,290,169).

17. Claim 34 recites a distance approximately 2 mm from the distal end of the light guide where the intensity is greater than that at the face of the distal end. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the curing device of FRIEDMAN producing an output curing light beam converging or intensifying at distance very close to the face of the distal end of the light guide being approximately 2 mm since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. One would have been motivated to converge or intensify output light at 2 mm for the purpose of curing the teeth at close proximity to effectively cure the tooth/teeth.

Allowable Subject Matter

18. Claims 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

19. Claims 19-31 are allowed.

Response to Arguments

20. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

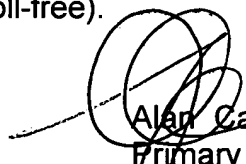
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Cariaso whose telephone number is (571) 272-2366. The examiner can normally be reached on 9-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan Cariaso
Primary Examiner
Art Unit 2875

May 1, 2006
AC